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ABSTRACT

Korean industrial policy, which has guided the Korean economy through nearly three decades of spectacular growth, is showing its age. The policy has not been adjusted fully to the new challenges facing the economy, and it has not recognized the obsolescence of its key instruments. This paper argues that the time has come, as in other advanced industrial countries, to disengage the government from managing the economy's structural development and to adopt a new compact to delineate the responsibilities of business and government.

Under this compact, responsibility for allocating investable funds would be shifted fully to the industrial and financial sectors, but at the price of greater competitive discipline and regulatory oversight. Establishing this new framework presents an enormous challenge to policy. In addition to complexities of the transition, the government will have to maintain macroeconomic stability and the momentum of savings and investment, tackle the "new" market failures associated with Korea's rising technological level, and develop new institutions to increase the flow of information, reduce conflict, and ensure the equitable sharing of the fruits of economic progress.

In coming to concrete policy recommendation concerning financial sector reform, the role of the chaebol (Korean conglomerates), and the emerging new role of the state as epitomized by Korea's legendary bureaucracy, the paper reviews Korea's industrial policy environment and the experiences of other more developed economies. Its goal is to establish a practical agenda for the 1990s drawing upon Korea's traditional strengths but adapting to current circumstances.

FOREWORD

One of the keys to Korea's success has been its effective trade and industrial strategy. A remarkable feature of Korea's industrial policy history was its comprehensive nature and the strong and effective links between public policy and private initiative. Intrinsic to this policy nexus has been the role of the financial sector. The second remarkable feature of Korean policy has been its flexibility and effective implementation. Recent economic and political events are forcing more rapid change in Korean policy towards the financial sector, towards conglomerates, and towards the way in which government policy is managed. This paper examines the challenges currently facing Korean policymakers and provides concrete recommendations for new policy directions in the areas of financial sector reform, regulatory changes and policies towards conglomerates. As such it attempts to set an agenda for the 1990s.

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TABLE OF CONTENTS

TABLES

INTRODUCTION

Industrial policy remains at the center of the debate about Korea's economic future. To some, Korea's industrial policy has lost its creative edge by abandoning selective, strategic support of industry. To others, despite pronouncements to the contrary, the government is still pursuing an interventionist strategy that is poorly suited to Korea's modern, complex economy. And to still others, there is a need for a new model, rooted neither in Korea's past nor the elusive "laissez faire" of economics textbooks. But perhaps the most striking contrast with the past is that controversy and even confusion have taken the place of the self-confident, definitive policies of earlier periods.

The central theme of this paper is that Korean industrial policy, despite its rapid transformation over the last decade, has not kept pace with the enormous change—political and economic, domestic and international—in the country's policy environment. The "right" industrial policy depends on constantly changing factors: the nature of market failures facing the economy, and the scope and effectiveness of policy instruments available to government. Some market failures vanish with economic growth, while others take their place at more advanced stages of development. Instruments that are appropriate in one economic environment become ineffective, illegal, or too risky in others. And the evolution of political institutions may change how a particular instrument is used, so that, over time, the same instrument may produce different and less satisfactory results.

Korea is at a crucial turning point. Of course, its recent economic performance has been excellent, notwithstanding that growth rates have now dropped below the double-digit rates of the mid-1980s. But the increased incidence of conflicts between government and business suggests troubling contradictions in economic policymaking. Korea's policy goals are increasingly those of an advanced industrial economy—to become more competitive in advanced industries and to maintain market shares in key world markets. Yet the most visible instruments of Korean industrial policy, including especially credit policy, have been inherited from a simpler economy. These tools are not well adapted to addressing the country's new economic objectives and are rapidly becoming politicized. As we shall argue, this conflict between goals and means is undermining the credibility of industrial policy and is delaying the development of institutions that will have to be important in the economy's next phase of growth.

This paper argues for a "new compact" between business and government as the core of the policy approach of the 1990s. This compact would disengage the government from direct intervention, especially in the financial sector, and shift authority over resource allocation to the private sector. To balance these new freedoms, private firms would be exposed to greater competitive pressure and firmer regulatory oversight. Government would focus its attention on maintaining a firm but predictable regulatory environment, building greater consensus around a vision of a fair and sophisticated economy, and developing the human and technological resources required to make this vision a reality.

A shift to such a compact is consistent with the policy experiences of the several major industrial economies reviewed in this paper. As in France, such a compact may be difficult to

develop because the bureaucracy, used to its traditionally important (and highly successful) leadership role, will be reluctant to relinquish its authority. Yet the need for a shift could become especially urgent—and even more difficult to engineer—if the ongoing democratization process puts an end to the insulation of Korea's technocratic bureaucracy.

THE INDUSTRIAL POLICY MENU

Rationales for Intervention

Just why an economy should utilize industrial policy is subject to much confusion. Some authors treat the question of industrial policy almost as a choice between religions—between the "old" Anglo-Saxon economics of competitive markets, and the "new" political economy of government-directed capitalism. This is a false dichotomy. Modern analysis provides both rigorous rationales for industrial policy, and arguments against interventions based on several popular justifications.

Some of the frequently cited goals of industrial policy are not supported by rigorous analysis. For example, although there are good reasons to shift resources from slow to fast-growing sectors in the course of economic development, this does not itself require an active industrial policy because market forces (barring critical distortions) would also generate such shifts. Still other popular goals provide a recipe for losses rather than benefits. One popularly cited goal is to raise the value added of domestic industry by supporting high-value-added branches. Yet this typically requires the transfer of capital from productive uses in labor-intensive (and therefore low-value-added) industries to relatively unproductive uses in capital-intensive (and high-value-added) industries. For example, Yoo (1990) has estimated that in the early 1970s capital was used approximately four times as productively in Korea's clothing and footwear sector as in other manufacturing sectors.

Over the 1980s, however, rigorous arguments for industrial policy have been developed in some detail. One category of arguments focuses on externalities associated with specific industries. Some activities create technology or improve resources in such a way that the investing firm cannot fully capture the benefits as private profit. In these cases, protection or subsidization can expand the scale of the externality-generating activity and create social gain. At early stages of industrialization, a new firm may create externalities simply by importing a foreign technology and proving to other firms that foreign techniques can be successfully adapted to local conditions. In more advanced economies, externalities are likely to be limited to newer, technology-intensive industries. In mature economies, industrial adjustment may also involve externalities—for example, under the social arrangements of advanced economies, much of the cost of maintaining and relocating unemployed workers is borne by the state. In this context, industrial intervention may be designed to smooth the private adjustment process in order to minimize the socially borne costs of unemployment.

A second category of arguments focuses on strategic support for domestic firms in global, oligopolistic markets. In this setting, appropriate government intervention can help domestic firms capture (from foreign firms) a larger share of the international "pool" of excess profits. These strategic arguments apply most directly in internationally concentrated markets such as aircraft. Even in this "ideal" industry, empirical studies do not suggest that countries have been able to capture large benefits from strategic trade policy. The case is weaker for relatively competitive sectors such as automobiles and semiconductors, where all but a few companies fail to make significant profits.

Thus, while it is now recognized that industrial policy can be justified, it is also clear that many conventional arguments for it do not pass analytical scrutiny. The case for intervention is strongest for new, export-oriented industries (which facilitate the diffusion of foreign technology) in developing economies, and new technology-intensive industries (which result in inappropriable gains to other firms and sectors) in advanced economies. Intervention may be also justified in declining sectors if some rigidity distorts the economy's internal ability to adjust. Yet the arguments for industrial intervention are typically subtle. There is little justification for using such simple indicators as sectoral growth rates or value-added ratios to direct industrial policy; the rationale has to be based on estimates of elusive externalities.

Costs of Intervention

The key argument against intervention is that faulty intervention is worse than neutrality; poor targeting diverts resources from economically beneficial activities to inefficient ones. Governments often follow a "hunch" to support a particularly prestigious or difficult technology, without any clear evidence of market failure. Examples of such mistakes abound in the industrial policies of Europe (Concorde) and Japan (artificial intelligence), and they have also resulted in costly mistakes in Korea. Instances of faulty targeting have continued even after the costly "white elephants" of the heavy and chemical industry promotion drive; the Korean government was slow to support the development of microcomputers and memory chips, which now appear to be major winners, but it did support the development of a minicomputer that is unlikely to find a market beyond government-related procurement (Clifford 1991).

In some policy environments industrial policy may not even get a fair chance to be successful, because targets are chosen on political rather than economic criteria. To a greater or lesser extent, political institutions tilt intervention in favor of powerful, rather than economically meritorious, industries. Established, "sunset" sectors will often have an especially strong advantage against emerging "sunrise" sectors. Moreover, given the possibility that politically strong groups can manipulate industrial policy, the support for an active approach is likely to be greatest in countries that have powerful special interests. For these reasons, in some political circumstances industrial policy is more likely to be misdirected than accurately targeted.

Even correctly targeted intervention has costs. The taxes required to finance industrial subsidies, for example, withdraw resources from other activities and distort economic decisions in the taxed sectors of the economy. Alternatively, policies that raise a targeted sector's

revenues through protection tend to distort the consumption decision and reduce welfare. And intervention can draw substantial resources into nonproductive activities such as lobbying.

Thus the decision to adopt an active industrial policy ultimately involves the weighing of costs and benefits. The question is not whether a particular industrial objective is desirable, but whether industrial policies make the achievement of the objective more likely, and whether the incremental contribution outweighs the risks and costs involved. Korea's future policies must be evaluated with these demanding criteria in mind. There is no single, durable conclusion in the industrial policy debate; past successes provide little guidance for the future. The answers vary across industries, countries, and time.

Instruments of Intervention

The effective implementation of industrial policies requires sophisticated institutions for setting policy goals and efficient instruments. Targeting requires a great deal of information and difficult technical judgments. Thus active industrial policies require a powerful, capable, technocratic institution that is, on one hand, sheltered from the political process, and on the other, well connected to industry expertise. This requirement has been met in only a small number of countries, including Korea. As we discuss below, it appears that economic decision making is becoming politicized in Korea, and that the business-government relationship is now more strained than would be desirable from the viewpoint of information flows. Much will depend on how Korea's democratization process evolves—specifically, whether it moves toward the stable, single-party model that has helped to keep the bureaucracy insulated in Japan.

In a market setting, industrial policy also requires instruments that substantially change the incentives facing industry. This can mean lowering input costs or increasing revenues. The instruments that operate on costs include direct subsidies on (or preferential access to) capital, energy, imports, and other key inputs. The main instruments that operate on revenues are protection from domestic or foreign competition and government procurement. Because an economy with relatively small markets (Korea fits this category for many of the advanced products it now makes) is limited in using its own markets to support the development of new industries, Korea has relied largely on cost-reducing instruments to implement its industrial policies, including especially directed credit.

The range of available, legal instruments has sharply narrowed over time. Many of the instruments of industrial policy have been controlled or declared illegal by international agreements. Protection through tariffs has been gradually eroded by successive GATT rounds. The direct use of subsidies in export-oriented industries has been curtailed under the GATT Subsidies Code and in the face of aggressive countervailing actions by the United States and other countries. A Procurement Code has also begun to limit the extent to which governments can give preference to their own producers. Finally, for reasons of domestic economic efficiency, most countries have liberalized trade and permitted greater competition in domestic markets, further limiting the scope for setting industrial incentives. As a result of these changes, the industrial policies of most advanced countries have shifted either toward greater neutrality

(as in the case of Germany and Japan) or toward greater reliance on credit policy, competition policy, and functional support for technology as the main instruments of industrial policy.

Industrial Policies in Advanced Countries

A comparison of industrial policies across industrial economies reveals a surprisingly wide range of institutions and policies. The main trends in industrial policy are outlined in Tables 19.1 and 19.2 for the four largest industrial countries. The table shows that the objectives of policy have varied widely, both across countries and within countries over time.

France has had highly variable policies, including periods of aggressive intervention in the 1960s and early 1970s, and again in the mid-1980s. Industrial interventions were scaled back substantially outside these periods. German policies have experienced more moderate shifts, with a period of relatively intense involvement in the 1970s preceded and followed by more neutral policies. Japan's industrial policies moved gradually from intensive intervention in the 1950s and 1960s to general, functional approaches in the 1980s. Throughout, however, Japan has maintained powerful institutions for facilitating dialogue and information exchange between government and industry. The United States has no central institutions charged with setting industrial policy. Considerable research support is provided through defense-related procurement and research, and from time to time the government has also become involved in industrial adjustment and rescue efforts through ad hoc interventions. Overall, the U.S. policy stance has been procompetitive and relatively neutral (Table 19.1).

Some general conclusions appear to hold for all four economies. First, the use of directed credit has declined over time, spurred by the increased sophistication and international integration of capital markets. France, which departed from this trend briefly in the early 1980s by nationalizing its major banks and establishing policy priorities for the allocation of credit, paid a high price in accelerated inflation, payments deficits, and lost growth.

Second, policies that have encouraged mergers and combinations and discouraged combinations involving foreign firms have also been largely abandoned. (In the United States a reverse policy trend has occurred: antitrust policies are used with declining frequency to prevent mergers even of horizontal competitors.) In recent years, both national and international merger activity has accelerated in anticipation of the single European market and under the pressure of international competition.

Third, subsidies and preferential government procurement remain important, notwithstanding international agreements that limit the use of these instruments for internationally traded commodities. Table 19.3 shows that subsidies are equal to approximately 2 percent of GDP in Europe, 1 percent in Japan, and 0.6 percent in the United States. The composition of subsidies (as shown for Germany in Table 19.4) generally favors declining sectors such as agriculture, mining, and shipbuilding; basic social-sector industries such as transportation, education, housing, and health; and one infant industry, aerospace.

Table 19.1. Objectives and institutions of industrial policy

	United States	West Germany	France	Japan
Historical evolution	Emphasis on maintaining neutral, competitive environment and on defense capability. Since early 1980s relaxation of antitrust policy and ad hoc interventions to support declining and import-threatened industries. Debate on more focused industrial policy remains unresolved.	Neutral until mid-1960s; from 1966 on concerted focus on high-technology industries. Substantial support for declining industries in late 1970s; shift to greater neutrality and privatization in 1980s.	Increasingly ambitious plans until mid-1960s; starting in 1966 emphasis on concentrating investments in national champions. From mid-1970s retrenchment to narrower portfolio of high-technology projects. In 1980s broad nationalization effort tried and abandoned; focus now on technology and privatization.	Emphasis on heavy industry until late 1960s and on knowledge-intensive industry since. Gradually relinquished most selective instruments: abandoned exchange controls in 1962 and formally liberalized trade between 1960 and late 1970s. Policies now concentrate on new technologies.
Dominant policy objectives	Maintain competition; develop defense technology; prevent system-threatening bankruptcies; moderate import threat.	Promote new technology; support declining industries and promote adjustment.	Develop "industries of the future"; achieve international competitiveness; facilitate adjustment; foster national champions.	Develop technology for knowledge-intensive industry; facilitate adjustment.
Implementing institutions	Department of Defense; Trade Representative and other trade-oriented agencies; ad hoc legislative pressure and Presidential commissions.	Economics Ministry; "concertation" councils with government-business-union representation.	Ministry of Industry, Planning Commission; economywide and sectoral-indicative plans; state-owned banks and firms; dialogue with industry associations.	Ministry of International Trade and Industry; "visions"; business-government-public sector councils; dialogue with firms and industry.

Sources: Entries for each country are based on the following: United States: Wachter and Wachter (1981), Wescott (1983), Behrman (1984), OECD (1989c); West Germany: Weiss (1984), Wagenhals (1983), USITC (1984), Smith (1983), Legler (1990), OECD (1986), OECD (1986b); France: Franko and Behrman (1984), USITC (1984), Adams and Stoffaes (1986), OECD (1989a), DeWitt (1983); Japan: Lee and Yamazawa (1990), Taylor and Yamamura (1990), USITC (1983), Fukushima (1984), Behrman (1984), Adams and Ichimura (1983), Komiya, Kuno, and Suzumura (1989).

Table 19.2. Instruments of industrial policy

	United States	West Germany	France	Japan
Credit policy	Private banks and private equity, bond and venture-capital markets finance industry. Government guarantees are provided in exceptional system-threatening circumstances.	Most industry financing is handled by large private banks, which also oversee management through equity positions. The government directly provides export credit and some venture capital.	Directed credit was pervasive during early 1980s. Government-owned or controlled financial institutions (esp. Caisse de Depots and Credit National) accounted for significant share of credit provided to business. Additional funds are available for specific policy purposes. Aggressive denationalization and decontrol under way.	Group-related banks provide most capital. Direct lending through the Japan Development Bank modest since early 1960s. Until liberalization in 1980s the cost of capital was below world levels. Various policies promote savings. Entry in financial sector is restricted and banks are subject to "window guidance" from Bank of Japan.
Taxes and subsidies	Accelerated depreciation promoted investment in 1980s; new investment incentives now modest due to equalized earned income and capital-gains tax rates.	Special tax benefits are used to implement regional objectives and energy policy, and to support declining industries such as coal and steel.	Various tax exemptions are used to promote new investment and mergers. There is a substantial tax credit for R&D. Subsidies provided for state-owned industry.	Although tax credits and deferrals played an important role in early industrial policy, tax rates have become relatively uniform across industries since mid-1970s.
Protection	Antidumping and subsidy laws and 301 clause provide leverage for negotiating voluntary export restraints (VERs) by other countries. Some declining industries are protected by quotas and VERs.	Protection has declined, except in politically important sectors such as agriculture, forestry, mining, and textiles.	Tariffs and quotas are set by the EEC, but special procedures have been used at times to protect favored industries. Foreign investment is invited in high-technology areas but is controlled for strategic considerations.	Formal barriers are modest. Low rate of manufactured imports suggests invisible barriers, most likely operating through the distribution system. Foreign investment is also surprisingly limited.
Competition policy	Until early 1980s antitrust policy was aggressively aimed at preventing market dominance. Policy has been more permissive since and antitrust exemptions are available for joint research.	Anticartel policy has been in force since the early 1950s, but exemptions have been granted in distressed industries and some mergers were encouraged in the 1970s.	Mergers were encouraged between the mid-1960s and early 1980s to create "national champion" firms.	Mergers were encouraged until the mid-1970s. Anticartel policies are weak; relatively high prices suggest that producers exercise market power in domestic markets. Officially sanctioned cartels operate in depressed industries.

Table 19.2. *(continued)*

	United States	West Germany	France	Japan
Science and technology	Considerable research and development financed by the Defense Department, but the government has resisted redirecting these funds to non-military applications. Since the 1980s two major research consortia have been developed.	Extensive support is offered to research from the government directly and from commercial R&D spurred by fiscal incentives.	Specific industries are designated as "industries of future." Ministry of Research merged into Ministry of Industry to facilitate coordination of research and industrial policies and greater spending on R&D.	MITI-sponsored joint industry research projects have been linked to major improvements in the competitiveness of key industries.
Government participation	Defense procurement plays an important role in high-technology demand.	Government ownership in several major industrial firms divested in the 1980s. Government procurement favors domestic products.	Half of economy, including all major banks, nationalized in early 1980s. Government procurement supports domestic producers. Aggressive privatization now under way.	Little direct ownership. Government procurement favors domestic industry.

Table 19.3. Subsidies in OECD countries (General government, percentage of GDP)

Country	1982	1988
France	2.2	1.9
Germany	1.8	2.2
Japan	1.4	1.0
United States	0.8	0.6

Source: OECD (1989b).

Table 19.4. Structure of subsidy rates: Germany (Subsidy as percentage of value added)

Sector	1973–74	1979–82
Agriculture, forestry	88	180
Electricity, gas	4	3
Coal mining	30	93
Other mining	16	19
Iron and steel	1	4
Oil refining	4	4
Shipbuilding	12	30
Aerospace	65	32
Food and beverages	0	0
Construction	1	2
Trade	1	1
Railways	168	100
Shipping	28	21
Other transport	16	17
Postal services	4	10
Credit institutes	3	1
Insurance	5	10
Housing	51	57
Education service	22	18
Health and veterinary service	13	17
Other services	2	2

Source: OECD (1986).

Table 19.5. R&D spending in OECD countries (Percent)

	1963	1975	1981	1987
Share of R&D in GDP				
France	1.50	1.80	1.97	2.28
Germany	1.40	2.22	2.42	2.71
Japan	1.20	1.96	2.32	2.78
United States	2.90	2.27	2.45	2.72
South Korea		0.42	0.64	1.78
Share of R&D financed by industry				
France		---	68	68
Germany		---	82	84
Japan		---	98	98
United States		---	68	66
Korea		33	56	80

Sources: Wescott (1983), Nelson (1990): data on Korea is from the Korean Ministry of Science and Technology.

Table 19.6. Structure of R&D expenditures: 1980 (R&D spending as percentage of output)

	France	Germany	Japan	U.S.
Aerospace	14.1	21.6	1.0	36.1
Office machines	10.1	6.5	5.9	19.3
Electronics	11.4	8.1	6.2	14.4
Pharmaceuticals	5.1	8.3	8.8	9.5
Scientific instruments	2.5	2.1	2.8	10.5
Electrical machinery	1.6	8.1	3.5	7.3
Automobiles	2.1	2.7	2.8	3.0
Chemicals	1.9	3.4	3.0	1.7
Other manufacturing		5.4		
Nonelectrical machinery	0.6	2.3	1.7	1.8
Rubber, plastics	1.6	1.6	1.2	1.2
Nonferrous metals	0.6	0.6	2.3	0.7
Stone, clay, glass	0.5	0.7	0.9	1.0
Food, beverages	0.1	0.2	0.4	0.2
Shipbuilding	0.2	0.6	3.6	
Oil refineries	0.5	0.5	0.3	0.7
Ferrous metals	0.3	0.6	1.1	0.6
Fabricated metals	0.5	0.7	0.5	0.6
Paper, printing		0.2	0.1	0.4
Wood, furniture		0.2		0.3
Textile, footwear	0.1	0.2	0.2	0.3
Average	2.0	2.1	1.6	2.6

Table 19.7 Export shares of technology-intensive products (Percent)

Country	1965	1975	1984
France	7.3	8.4	7.7
Germany	16.9	16.8	14.5
Japan	7.3	11.6	20.2
United States	27.5	24.5	25.2
Korea[a]	0.0	0.5	2.9

Source: McCulloch (1990), World Bank estimates.

a. Estimates based on exports of electrical goods, electronic equipment, and transport equipment.

Table 19.8. Total factor productivity growth (Percent per annum)

	1960–73	1973–79	1979–86
All manufacturing			
France	5.3	2.9	1.4
Germany	3.4	2.4	1.4
Japan	5.6	3.5	4.2
United States	2.5	0.3	2.7
Korea		2.7[a]	
Machinery/equipment			
France	3.8	3.3	-0.2
Germany	2.4	2.2	1.3
Japan	6.2	6.0	9.2
United States	5.2	0.5	4.0[a]

Sources: OECD (1989a), Zeile (1991).

a. 1972–85.

Fourth, policies aimed to promote technology have become more prominent. As Table 19.5 shows, R&D spending increased in the 1980s in each of the four developed economies analyzed in comparison with Korea. The private sector performs two-thirds of this R&D in the private sector in Europe and the United States, and nearly all in Japan, but in all countries private R&D spending is vigorously encouraged by tax advantages. While subsidies favor declining industries, not surprisingly, R&D spending favors new and emerging sectors. As Table 19.6 shows, R&D expenditures were highest in such industries as aerospace and computers; intermediate in heavy industries subject to rapid change, such as automobiles and chemicals; and lowest in stable industries such as foods and beverages, shipbuilding, and oil refining.

Despite considerable variations in the thrust and intensity of industrial policies, it is difficult to find a relationship between industrial policy and economic performance, either across countries or over time. Since industrial policies typically aimed to increase the production of advanced manufactured goods, it is surprising to see that France, Germany, and the United States had essentially constant market shares in the world exports of technology-intensive goods over the 1965-84 period (Table 19.7). Japan substantially increased its market shares over this time, and especially so during the most recent decade, under moderating and increasingly functional interventions. There is also no obvious relationship between policy approaches and productivity growth (Table 19.8). In France, productivity growth was slowest during the period of the most intense industrial policy activity, and especially so in the machinery and equipment industries targeted by French policies. The United States, which had no coordinated industrial policies at any time during this period, lagged behind Europe in the 1970s but outperformed Europe in the 1980s.

Overall, there is a tendency for interventions to moderate with economic maturity. This trend is evident in the pattern of intervention across the four industrial countries, and also within Germany and Japan over time. Other similarities between Japan and Germany, the two most successful industrializers of the last 50 years, may be much more important than their approaches to policy. In these countries national policy goals were shared by business and labor, and easily implemented through effective industry-financial-sector relationships. Special linkages between banks and firms in these economies helped to finance risky, long-term investments without government intervention. Both countries also pursued policies that were largely market-conforming, and both eventually converged on R&D support as the centerpiece of their industrial policy.

KOREA'S INDUSTRIAL POLICY ENVIRONMENT

Evolution of Korean Policies

The broad outline of Korean industrial policy is captured by the three-period approach popularized by the World Bank (1987). In the first phase that began in the mid-1960s, policies favored exports in general, without specific sectoral biases. The exchange rate was set competitively and a wide range of interventions helped to offset the anti-export bias of the trade

regime (Westphal 1978). Credit allocations favored exporters, reflecting higher social returns on export-oriented investments than on import-substituting investments. This regime rewarded size and growth with access to scarce capital and set the stage for the formation of large family-owned firms and the future trend toward the concentration of Korean industry.

The second policy phase, spanning the mid-1970s, was characterized by intense, selective interventions favoring heavy and chemical industry (HCI). No other period in Korea's recent economic history has produced as much controversy as this episode. Initially treated as a fiasco by most Korean scholars, it has been reevaluated in recent years in a more neutral (World Bank 1987) and even favorable light (Amsden 1989; Auty 1991; and Wade 1990). The HCI policy was implemented through directed, subsidized credit, selective protection, regulations affecting industrial entry, and direct government involvement in industrial decision making. The regime had some of the expected negative consequences: inappropriate industry choices, excessively capital-intensive investments in the targeted sectors in an otherwise capital-starved economy, and the retardation of trade and financial liberalization. But it also had positive results: a discrete jump in Korea's "level of industrialization," the development of some potentially world-class firms, and inroads into lucrative, Japanese-dominated markets (Petri 1988; Leipziger and Song 1991).

The third policy phase began as Korea abandoned HCI preferences during the traumatic economic adjustments of 1979–81 (see Cho 1988; Leipziger and Petri 1988; Zeile 1990). The policy shift was hastened by severe problems in the nontargeted, labor-intensive sectors of the economy and by the balance-of-payments crisis created by the second oil shock. The shift away from intensive interventions in heavy industry was well timed. It permitted Korea to take advantage of the boom in manufactured exports in the mid-1980s and allowed it to embark on a trade liberalization path that was essential for maintaining a cooperative relationship with the United States. Korea also began to liberalize its financial sector, but, as shown below, much less progress was made in this field.

The functional thrust of Korea's new industrial policy was formalized by the Industrial Development Law of 1985 and the simultaneous repeal of selective industrial promotion laws. Support for research and technology (R&D) replaced directed credits as the mainstay of policy. Yet government did not abandon ad hoc industrial interventions. It restricted entry into industries where size was thought to be necessary for export success; for example, Samsung was prohibited from entering the automobile market a number of times in the 1980s. The government sharply disciplined Kukje (the sixth largest *chaebol* at the time), but came to the rescue of other conglomerates heavily involved in shipbuilding, machinery, and other overextended industries. It also helped to rationalize "sunset industries" such as shipping and overseas construction with government-mandated mergers, divestitures, and closings.1/ Most importantly, it kept the badly damaged financial sector solvent.

1/ For details of the shipping rationalization program, for example, see World Bank 1987, Volume 2).

Under the Industrial Development Law, eight industries have been rationalized.2/ Textiles were given three years to adjust, and dyeing two; and both were granted access to subsidized loans to modernize their equipment.3/ Two other industries designated for rationalization, ferro-alloys and fertilizers, were both uneconomic in Korea as far as one can judge. The former was treated in a fashion analogous to Japanese restructuring under the Depressed Industries laws.4/ Specifically, two existing copper-smelting firms were merged into a domestic monopoly, future entry was barred, and the industry was thus "saved." In manganese steel, three firms were designated to supply the Pohang Steel Company on a long-term, exclusive basis, under a contract arranged by MTI.

One basic question that arises is whether an independent banking sector would have been willing to finance these restructurings. If not, was some fundamental market failure involved? The fact is that it is difficult to find here the externalities that would usually justify industrial policy. With the possible exception of dyeing, none of these industries was pursuing new activities where learning or dynamic economies of scale might have been important. As in other countries, these interventions probably reflected political considerations and fears of the effects of large corporate failures on the banking system. It is fair to say that the government has been more successful in disengaging itself from sunrise industries than from sunset industries.

The government has also remained closely involved in credit policy. Moreover, its basic role in rationing credit has in turn forced it to become involved in many additional ad hoc regulations. In 1989, for example, the government became concerned that the *chaebol* were using bank credit to speculate in real estate rather than to invest in manufacturing. It is understandable why they should have wanted to do so: since the profitability of real estate investments was in effect determined by the high cost of funds in the nonpreferred sectors, the *chaebol* could earn very attractive margins on money borrowed at commercial bank rates. Thus the government had to invent a new decree that required conglomerates to divest themselves of "excess land holdings," and it eventually bought land from the companies at handsome prices.

Efforts to limit the *chaebols'* share to 65 percent of new low-cost bank loans have created a similar chain of unintended interventions. Faced with the deteriorating export performance of several major companies, the government sought a way to make additional funds available for productive investment. To justify the additional credit, the *chaebol* were told to select three core operations for specialization, which would be exempted from credit limits. Many chose their most capital-intensive activities, including especially petrochemicals—certainly not the industries that Korea needs to foster for the future. It is not clear whether or not the government

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2/ See J.H. Kim (1990) for a complete review.

3/ See World Bank (1987, Volume 2) for a case study of the textile industry.

4/ The Law of Special Measures for the Stabilization of Specific Depressed Industries was adopted in 1978, with a five-year horizon, and was then replaced in 1983 by the Law of Special Measures for the Structural Improvement of Specific Industries. See Peck, Levin and Goto (1985) and World Bank (1987, Volume 2) for details.

simply aimed to make more credit available to the *chaebol* and used the specialization directive merely to make the policy more palatable.

What is clear is that access to credit remains rationed and politically determined, and it repeatedly involves the government in questionable new pronouncements and regulations. Controlled systems are always subject to abuse, as several recent incidents illustrate, the interest differentials that arise from domestic and international capital controls produce a great temptation for selling access to bank credit, and for bringing foreign capital into domestic capital markets.

These pressures suggest a need for new approaches to financial policy, as well as clearer policies of regulatory control. In Korea's increasingly politicized environment, reformed institutions much more than bureaucratic oversight are needed for economic supervision. Also at stake is the governments' relationship with the *chaebol*. Each new effort to control *chaebol* behavior generates new mistrust between business and government—a trend that is reinforced by popular resentment against the *chaebols*' economic power. Yet these developments reduce the likelihood of a cooperative business-government relationship, such as exists in Germany or Japan.

Domestic Environment in the 1990s

There has been more political change in Korea during the last five years than in the previous 20, and the transformation of the country's political institutions is likely to proceed rapidly in the future. A similar acceleration of change is evident in the international economic environment, where the emergence of new regional blocs and the challenges of socialist transition are likely to trigger major global economic realignments. These forces require new approaches with regard both to policy goals and to the instruments used to pursue them.

Sophistication. Savings rates are setting new records, and investment remains high in both physical and human capital. The relative size of the technology-intensive sector has expanded, and the economy's manufacturing sector is becoming far more sophisticated and diversified. Many Korean firms now rank among the world's largest companies and are becoming more thoroughly integrated into the world economy through corporate alliances and foreign investments. The growing complexity of the economy implies a larger gap between the technical information available to firms and that available to the government. Moreover, more sophisticated markets and larger firms are better able to evade or circumvent government directives.

The changing capabilities of the economy also affect the rationale for intervention. The objectives of the 1960s and 1970s—gaining experience in risk taking and in the acquisition of foreign technology—are less applicable today. Korea has acquired enormous experience with importing technology; its private sector is alert to new opportunities and understands its own capabilities. Korean companies are experienced in international markets and no longer need the stimulus of government intervention to look abroad.

The new directions of the economy suggest, however, that technology-related market failures may be increasingly important. New technology inevitably leaks out, to the benefit of firms other than those investing in it. New industries may involve learning externalities—one firm's experience facilitates the growth of the whole industry through human capital investments or the development of subcontractors. Evidence of such externalities can be found in the extensive geographical and national clustering of high-technology industries. An especially important source of market failure is human capital. Because Korean workers move a great deal from company to company (like U.S. workers, but unlike Japanese workers), individual firms have insufficient incentive to invest in human capital. This leaves this important form of investment to private capital markets, which are notoriously flawed in financing human capital investment.

Changing goals. Economic progress is likely to remain a preeminent goal in Korea, but the relative importance of other, competing factors is rising. Rising incomes allow people to pay more attention to issues such as the environment, housing, health, and equity. In addition, the relative political weight of the middle and working classes is increasing as the political process becomes more open. Thus government is under great pressure to show improvements in the standard of living and in the distribution of the fruits of economic progress. There is also pressure to avoid policies that might raise the suspicion that specific companies or individuals are being helped to become rich at the expense of society.

It is tempting to argue that these changing attitudes will shift priorities from investment to consumption. Yet the experience of high-growth countries, including Japan, demonstrates that savings and investment can remain high even as income levels rise. During rapid growth, incomes outpace households' ability to increase consumption and savings rise. However, countries experiencing rapid growth often find their stock of social investments to be insufficient, and are thus likely shift the structure of investment toward public goods such as infrastructure, housing, safety, and the environment. Social investments are capital-intensive, and like the HCI investments of the 1970s, could lead to a general scarcity of capital in other branches of economic activity.

Pluralism. Korea's economic ministries, like those of Japan, have a tradition of considerable decision-making capacity and authority. Economic policy has been implemented by relatively independent ministries, with little day-to-day intervention from the political process. But Korea's ability to maintain this Japanese-like separation between politics and economic decision making is under challenge; the government's political position is more fragile. Through the inclusion of the opposition in the DLP (Democratic Liberal Party), the architects of Korea's political process are clearly aiming to achieve the stability that underpins Japan's political model. Whether this initiative will succeed is unclear; Korea's societal structure and political process are more adversarial than those of Japan and, at least for now, seem to involve more direct conflict over economic objectives. This foreshadows much greater political involvement in future economic decisions. In such a political context, it has been argued in the United States, it is preferable to have no strong instruments of industrial policy that are vulnerable to political exploitation.

External Environment in the 1990s

Korean industrial policy will have to face various worldwide changes that affect the incidence of market failures and restrict the utility of various policy instruments.

Technology. Recent technological trends have dramatically shortened the life cycles of products, especially in electronics, machinery, and automobiles. These trends are changing the importance of various factors of production: knowhow is becoming more valuable, and raw labor less so. To remain internationally competitive, a company must pioneer, or at least rapidly copy, new features in its product line. Japan has emerged as a leader in these skills and is developing new competitive approaches—for example, made-to-order automobile manufacturing—that are designed to increase the importance of technology and design. Computer-aided design and manufacturing contribute to these trends, since they reduce the time and cost involved in implementing rapid product changes.

In some industries product turnover is associated with increasingly large and risky technological investments. In semiconductor manufacturing, for example, there are multiple technical solutions for achieving a particular product, and unless a company pursues all approaches, it may risk not participating in a given generation of technology and perhaps falling far behind for many years. To a lesser extent, similar considerations apply even in conventional industries such as automobiles, where each model now has to generate substantial sales over a shrinking life cycle in order to break even. Under these circumstances, large companies in all major countries have begun to establish alliances and partnerships for sharing the risks involved in developing new technology.

To participate in this high-level competition, Korean firms will have to be comparable in size and capabilities to their foreign competitors. In fact, Korea's *chaebol* are quite successful in attracting major foreign partners—consider, for example the collaborations between Hyundai and Mitsubishi, Daewoo and General Motors, and Goldstar and Hitachi. Samsung is perhaps the most successful example of a firm that has reached a global stage of development; it manufactures a broad range of products and has now succeeded as one of the first companies in the world to develop the 64-megabyte RAM memory chip. Thus Korea's electronics output in 1991 is expected to be the fourth-largest in the world (behind the United States, Japan, and Germany), and nearly double that of Taiwan (Clifford 1991).

It is sometimes argued that Taiwanese development patterns, which were less favorable to large firms, have also resulted in internationally competitive industries. (Unlike Korea, Taiwan used market interest rates to provide relatively equal access to credit by all sectors.) Indeed, Yoo (1990) has found that despite the credit preference given to heavy and chemical industries in Korea, the two countries were roughly equally successful in increasing their export shares to the OECD in heavy and chemical industries. It appears that Taiwan's smaller, equity-financed companies have been faster at responding to new market opportunities. But a closer examination of the evidence also shows that Taiwan has been less able to maintain its market positions over a longer period of time and has had to shift production abroad to keep down labor

costs (Mody 1989). Most experts judge the long-term prospects of Korean companies to be superior.

Yet the lessons go both ways. As a result of directing credit to larger companies, Korea has a much weaker infrastructure of small-component and part suppliers than Taiwan. Its larger companies are too diversified and need to become nimbler. At the same time, Taiwan has recently begun to foster larger-scale investments, for example through a publicly funded venture-capital fund. The recently announced government-funded joint venture with McDonnell-Douglas in aircraft production represents an especially vivid commitment to larger-scale manufacturing.

More International Players. Competition in international manufacturing is expanding, reflecting the declining cost of communications and a worldwide trend toward more open, investment-friendly policies. The new manufacturing powerhouses include not only China and ASEAN, but also Latin American economies such as Mexico and Chile, and eventually, one expects, the formerly socialist economies of Eastern Europe. These countries cannot yet challenge the technological lead of Korea, Taiwan, and Singapore in key manufacturing industries; but with the support of sizable direct investments from Japan, other advanced countries, and the NIEs themselves, they are rapidly moving into advanced manufacturing.

The internationalization of manufacturing is facilitated by the "disaggregation" of manufacturing processes into several stages, with each stage implemented in the most advantageous locale. Computers and advanced communications now make it possible to coordinate increasingly complex production chains. Such chains might include, for example, the manufacturing of sophisticated components in Japan, the manufacturing of more standardized components in Thailand or Indonesia, and final assembly or marketing activities in a low-wage country or in a final market such as the United States. In some cases, technological hubs such as Singapore coordinate manufacturing operations by sourcing components throughout East Asia.

These technological trends are strongly reinforced by the internationalization of the Japanese economy, which is driven by the high yen, high savings, and shortage of labor in Japan. Capital outflows have been also facilitated by the liberalization of Japanese finance; Japanese investors are aggressively exploiting the large differentials between domestic and foreign rates of return that emerged under earlier financial constraints. The pace of investment in East Asia has slowed in recent months, but the underlying trends are robust, and they are likely to spread to other parts of the world that achieve a suitably stable and open economic environment.

New Regional Alignments. European integration, now planned to encompass a single market of 250 million people and a still wider Free Trade Area, will create a large, but perhaps also less easily accessible market. The proposed North American Free Trade Area will generate a market of similar size, and with time might also include several Latin American countries. The truly novel feature of these regional alignments is that each includes its own potential low-wage manufacturing base. Thus the agreements may divert investment away from traditional manufacturing bases such as East Asia and into Latin America and Eastern Europe, which enjoy more secure access to European and North American markets.

Pacific Asia, at the same time, is steadily becoming more important both as a market and a source of supply. Despite such proposals as the East Asian Economic Grouping, no major, formal economic agreement is likely to emerge in the near term (Petri 1992 [forthcoming]), but ongoing market forces will continue to increase actual economic integration. Especially rapid progress is likely in some "growth triangles"— including perhaps a triangle that links Korea with Pacific Russia and western Japan— which involve small free-trade areas (FTAs) designed to exploit intense, local trading opportunities. Eventually, these smaller FTAs may provide further impetus for general liberalization. The ultimate impact of these trends cannot be assessed precisely, but Korea's trade, too, is likely to shift toward Pacific Asia.

With or without blocs, the trading environment in Europe and North America is likely to become more demanding, in part because Korean industry is increasingly competing directly against European and American firms. After the Uruguay Round, there will also be new disputes over the implementation of developing-country agreements on market access, especially in services. The enforcement of subsidies and other disciplines is likely to become stricter. The financial sector is bound to play an increasingly contentious role in trade diplomacy, both because it represents a key service and because preferential access to credit is a form of subsidization. These trends will further constrain Korea's traditional tools of industrial policy.

In sum, the foregoing yields five key conclusions on the objectives and implementation of industrial policy:

1. The rationale for intervention is shifting from conventional infant industry arguments to technological and strategic issues. The latter are best addressed by functional rather than selective interventions.

2. The key instruments of selective industrial policy—especially directed credit— are becoming ineffective because they can be evaded by large, sophisticated, internationally-connected companies. Continued efforts to rely on these instruments undermine the government's credibility and lead to a deterioration of business-government relationships.

3. Although they create problems for the execution of industrial policy, large companies are essential for building Korea's international competitiveness in technology-intensive industry.

4. Selective interventions are also constrained by domestic perceptions of unfairness and an increasingly contentious international trade policy environment.

5. The risks involved in maintaining a system of selective interventions are growing because (i) the government is less able to guide Korea's increasingly complex economy, and (ii) Korea's economic decisions are increasingly shaped by political rather than economic considerations.

The remaining sections of this paper analyze the implications of these conclusions for future policy directions.

KOREAN INDUSTRIAL POLICY IN THE 1990s

Despite substantial adjustments during the past decade, Korean industrial policy continues to be dominated by the goals and instruments of the 1970s. These are increasingly ineffective and inappropriate in the 1990s, and they undermine the government's efforts to establish a long-term economic strategy. In the interest of greater clarity and predictability, a new approach needs to be developed, including a "new compact" between business and government.

A key problem that underlies many of the contradictions of recent industrial policy is the government's ambivalence toward the *chaebol*. We have argued that Korea needs strong, independent companies to pursue global technologies and markets. The government appears to recognize this point and has given the *chaebol* considerable support. Yet it is also concerned about the power of the *chaebol* and has been reluctant to abandon financial and other instruments that allow it to control *chaebol* behavior. The result has been inconsistent, ad hoc interventions, as well as conflicts and policy mistakes. This dynamic is damaging the government's credibility in economic policy, and it undermines efforts to establish a cooperative business-government relationship.

The key issue is: Who should guide the industrial sector—the financial sector, industry itself, or government? In most successful advanced economies, decision-making authority rests in the hands of those best able to judge market opportunities—industrial firms and the financial sector. Inevitably, Korea must also move in this direction. But as lender of last resort, the government also has the responsibility to ensure that financial markets exercise appropriate discipline. Strong, independent monitoring agencies will be required for this task.

Putting this another way, we favor giving conglomerates full responsibility for their futures, but only subject to transparent and rigorously enforced rules. We favor independence for banks, but also subject to regulations that insure safety through adequate capital and supervision. Adopting this approach would represent a radical departure from Korea's past policies. It would require the strengthening of independent regulatory institutions, such as the Bank of Korea (BOK), Korean Fair Trade Commission (KFTC), and the Office of Bank Supervision and Examination, as well as the creation of new ones, such as Bank Examination Offices for nonbank financial institutions (NBFIs) and government banks.

Financial-sector reform is complicated by the fact that the financial system has not adequately dealt with the losses it has suffered during earlier periods of government-directed lending. Yet this is not a reason for maintaining a high level of government involvement in financial-sector governance. The legacy of past financial crises should be tackled, once and for all, by bold, transparent solutions to the problem of nonperforming loans, such as the issue of new government debt to replace irretrievably lost assets. As part of the deal that makes the commercial banks viable, they should be given full authority and responsibility for maintaining sound portfolios in the future.

At the same time, the government's profile should rise in other areas. Above all, the government must ensure that the policy environment is stable and predictable–that is, conducive to rational private planning and high rates of saving and investment. This requires, in addition to the well-known macroeconomic policies, new institutions of dialogue between business, labor, and government. It also requires efforts to improve public perceptions of economic progress in such areas as tax policy, infrastructure development, and social programs.

Education and applied research, including cooperative ventures that improve the dissemination of technology within Korea, represent likely areas of market failure and should be supported vigorously. The government should also encourage private investments in technology-intensive industries. Many of these policies can be implemented through a modern, functional incentive system—for example, through investment- and education-oriented tax policies. The government also needs to play an aggressive role in assuring access to key markets through negotiations and aid.

These changes would shift the focus of government activity but by no means diminish the government's overall role in economic affairs. The government would pursue economic progress by clarifying its vision of a technology-based society, enhancing the country's technological resource base, and encouraging private investment and technological progress. The government would also foster a consensus-oriented decision-making system by disengaging itself from the increasingly acrimonious relationship with private business and by focusing more attention on public goods such as safety, environmental protection, and infrastructure. To do so requires the strengthening of financial institutions to provide the oversight of the use of the nation's considerable savings and a clear regulatory structure to ensure its fair application.

In the following sections, we consider the ramifications of this general approach in four specific areas: *chaebol* policy, financial-sector policy, competition policy, and trade policy.

Chaebol Policy

Korea's large, closely held conglomerates cast a long shadow over many aspects of industrial policy. Financial-sector policies, for example, are closely linked to the *chaebol* issue because the government has relied on the credit allocation process to influence *chaebol* behavior. Regulatory policy is also tied to *chaebol* policy because the conglomerates exercise market power in many sectors of the economy. Because the *chaebol* are largely owned by individuals (see Table 19.9), policies toward the *chaebol* are inevitably colored by issues of equity and social justice.

Yet the *chaebol* have played a central role in Korea's industrial development and are vitally important to the future success of Korea's technology-intensive industries. Policy toward the *chaebol* is also complicated by the fact that these companies are highly leveraged and have enormous appetites for investment capital. In the face of these conflicting demands on policy, the government's attitude has been ambivalent. Efforts to liberalize the financial system have been slowed by the government's desire to make low-cost capital available to the *chaebol* and to control their behavior. Share ownership has been restricted and the selection of bank

Table 19.9: Ownership of large business groups

Group	Share of ownership (%)		
	Individuals	Group companies	Total clan control
Hyundai	27.5	40.3	67.8
Daewoo	9.8	40.6	50.4
Samsung	8.5	44.7	53.2
Lucky-Goldstar	7.6	30.6	38.3
Hanjin	27.7	24.3	52.0
Ssangyong	7.6	34.4	42.0
Sunkyung	21.5	29.1	50.6
Korea Explosives	10.5	30.8	41.4
Daelim	7.6	31.6	39.2
Lotte	3.6	20.0	23.6
Average of top 5 groups	—	—	52.4
Average of top 10 groups	—	—	48.2
Average of 61 large business groups	—	—	47.1

Source: EPB data submitted to National Assembly. Data as of April, 1991.

managers has been heavily influenced by the government in order to keep the *chaebol* from assuming control over the banks. And as we have shown, efforts to ration credit to the *chaebol* in the face of their inevitably high demand for below-market-rate credit, have led to a chain of contradictory interventions.

The *chaebol* dilemma has driven Korean industrial policy into gridlock. The government is reluctant to transfer decision-making authority to market institutions because it fears that the *chaebol* will capture the banks and abuse their power. At the same time, the government's continuing role in the economy prevents the emergence of independent private institutions, such as powerful banks, that could impose financial discipline on *chaebol* behavior. In the meantime, the government's instruments of control are becoming less effective, the directions of industrial policy are becoming confused, and the relationship between the government and business, instead of moving toward harmony, is turning confrontational.

The best way to address this dilemma is to relax direct financial controls on the *chaebol*, and to shift the job of controlling the *chaebol* to independent regulatory bodies, and to greater private-sector competition in both the financial and industrial sectors of the economy. This "new compact" would give the *chaebol* more freedom in raising and spending money, both at home and abroad. At the same time, it would subject them to stricter regulation and greater competition. The end result would be checks on *chaebol* behavior administered by private institutions and markets instead of government. This would free the government to pursue broader micro- and macroeconomic objectives.

With greater private-sector autonomy, some of the distortions that now lead to conflict and uneconomic actions could, with appropriate oversight, be eliminated. Interest differentials between bank and nonbank instruments would narrow, removing the temptation for arbitrage. With greater private participation (even if by the *chaebol* themselves) the banks would assume greater responsibility in lending and in corporate oversight. Of course, these changes require "cleaning up" the inherited capital structures of both firms and banks, which would otherwise not be viable in a commercial context. None of these changes would have to be implemented overnight—unlike Eastern Europe, the Korean economy is functioning very well—but a predictable, preannounced strategy is needed to signal a viable transition trajectory. In the following sections, we explore the implications of this strategy for financial-sector policy, competition policy, and trade policy.

Financial Sector Policy

The financial sector has not yet achieved the level of maturity common in other East Asian countries, let alone the OECD countries.5/ Until recently, for example, Korea had a virtually non-existent equity market. With government's desire in the 1980s to reduce the leveraging of Korean firms, the stock market expanded, with chaebol issuing equities but retaining large shares for individual owners. Almost three-quarters of Korean equity shares in

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5/ For a review of financial issues, see Nam (1990, 1991).

1988 were held by individuals, compared to a quarter in Japan (see Hahn 1989). Japan has made the transition from first generation ownership and now approximately 73 percent of shares are held by corporate owners, e.g., banks, trusts, and corporations compared with a mere 31 percent in 1949 and 57 percent in 1970.

There are, of course, many different models for organizing the relationship between "banks" and "industry"; but in each of the advanced countries there is substantial, independent decision-making authority vested in financial institutions. A weak financial sector may have suited Korean policymakers in the past, because it permitted government to pursue an active industrial policy. It is now a liability, which undermines the country's resource-allocation process.

The issue of financial liberalization is intricately linked to industrial policy. Prior to 1988, half of the funding for the corporate sector was derived from bank and nonbank debt issues, 20–25 percent from borrowing from abroad, and approximately a quarter from stock issue. Much of this credit was subject to an elaborate credit control system (CCS) established in 1974, which has allowed government to exercise considerable control over the flow of credit to specific industrial activities and different types of industrial borrowers.

Despite several rounds of liberalization since 1974, credit-based interventions have remained important in the 1980s and early 1990s. In 1984, for example, government froze the credit share of the largest 30 firms and cut off credit altogether to firms with debt/equity ratios above 500 percent. These policies were eventually reversed, though restrictions continued on the real estate or cross-corporate investments of the 49 largest conglomerates. In 1987 the government "urged" 82 firms with 50 billion won or more in bank loans to repay a total of 1 trillion won by issuing public stock. And in 1991 it ordered them to select three core business lines, promising to provide these with better access to credit.

The key to eliminating the need for these interventions is to make the financial sector independent. In a private financial system, effectively regulated and supervised, firms would have clear financial incentives to issue equity, to pursue promising business ventures, and to abstain from high-risk investments. One argument that is frequently used against the full privatization of the banks is that they would be controlled by the *chaebol* themselves. According to the Office of Bank Supervision and Examination, the top 10 conglomerates officially own about 20 percent of the top six commercial banks. As Table 19.10 shows, the role of large shareholders is even greater in nonbank financial institutions (NBFIs). Conglomerates also increased the number of NBFIs they owned—the top 10 owned 31 NBFIs in 1989—because the credit obtained from them is not subject to the same credit controls as normal bank credit.6/

To prevent *chaebol* ownership, the government limits bank credits to a single customer and bank ownership by a single customer to 8 percent of capital. Of course, because corporate ownership is hard to trace, this restriction probably does not limit ownership as much as it

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6/ The conglomerates have also used their NBFIs to circumvent regulations, such as the 9.27.80 decree halting further real estate purchases by the *chaebol*.

Table 19.10. Ownership structure of financial intermediaries: end of 1989 (Percent)

	Five NCBs	Provincial banks	Investment & finance cos.	Securities companies	Merchant banking corps.	All listed companies
Securities companies	3.4	2.8	1.4	2.7	9.6	5.1
Insurance companies	14.2	3.5	0.8	2.8	0.4	2.6
Other financial intermediaries	3.2	1.9	6.2	7.5	35.4	3.2
Nonfinancial corporations[a]	17.2	20.7	18.3	24.8	14.2	20.6
Foreigners	0.0	2.7	0.7	1.8	23.8	2.1
Domestic individuals	61.8	68.5	72.4	60.3	16.4	54.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**[b]
Small shareholders	77.7	76.0	66.6	65.5	55.1	-
Corporations	14.5	11.2	10.5	14.2	40.3	-
Individuals	63.1	64.8	58.1	51.4	14.7	-
Largest stockholders	5.8	9.4	16.1	26.2	17.6	-
Other stockholders	16.5	14.6	17.3	8.3	27.2	-
Corporations	16.0	11.5	7.7	6.8	25.2	-
Individuals	0.5	3.0	9.5	1.6	2.0	-

Source: Nam (1990).

Note: Includes listed companies only: 10 provincial banks, 29 investment and finance companies, 22 securities companies, and three merchant banking corporations. Figures are simple averages.

[a] Includes securities investment companies.

[b] Includes 11.8 percent held by government-invested companies.

appears. But if the 8 percent rule did work, it would distribute ownership responsibility so widely across different owners that banks would face little effective shareholder oversight.

As Nam (1990) has argued, it would be better to regulate the behavior of banks and the *chaebol* than to limit bank ownership. Indeed, since NBFI ownership is currently unregulated, it makes good sense to develop a comprehensive system of prudential regulation instead of ownership rules that have questionable merit, are difficult to enforce, and lack credibility. We now examine the implications of such a regulatory regime for (i) the central bank, (ii) bank supervisory agencies, and (iii) the financial intermediaries themselves.

Central Bank. The advantages of central bank autonomy are well known; a number of studies have shown that independent central banks tend to be associated with low-inflation environments because they are more insulated from the political process (Cargill 1988). In Korea, maintaining a low rate of inflation has been a traditional national policy objective, and the Bank of Korea (BOK), much like the Bank of Japan, has pursued this objective despite its close ties to the Ministry of Finance. With recent political changes, however, the case for insulating the BOK from political pressures, more along the model of Germany or the United States, is becoming stronger.

Commercial banks would have been unable to provide policy-based loans without the backing of the BOK. The BOK has provided substantial overdraft privileges, reaching at times 7–10 percent of the commercial banks' asset base, and a special window to rediscount policy loans. Rather than calling in nonperforming loans, commercial banks have been able to pass on their balance-sheet problems to the BOK, shifting the cost of policy errors to the least transparent portion of the financial system—the central bank's income statement. In the new regulatory regime, the BOK should abstain from lending to financial institutions, except according to guidelines that reflect the bank's responsibilities for monetary policy and the safety of Korea's financial system.

Industrial policy has also affected financial-sector policy in the sphere of interest-rate determination. Interest ceilings have enabled preferred creditors to borrow at rates well below those available to others. Minister Sakong's liberalization program of 1988 was only partially carried out and a recent study found that "lending rates and most rates in the primary securities market are still very rigid and unresponsive to market conditions, indicating that the Korean financial market is still far from being fully integrated and operating purely on a competitive basis. This phenomenon seems to be partly due to limited interest rate deregulation and partly to an inertia and mentality inherited from the time when most financial institutions were run like public enterprises" (Nam 1991:15). Further interest-rate deregulation is thus required, particularly since the capital market will eventually have to be opened to foreigners.

Bank Supervision. The legacy of government intervention is still evident in the balance sheets of commercial banks. Korean banks are marginally profitable, but serious portfolio

problems have been rolled over for many years.7/ Past attempts to clean up balance sheets have not been fully successful, nor has provisioning against potential losses been as vigorous as needed. Between 1985 and 1988 alone some 9.8 trillion won in financial assistance was provided to restructured firms at government behest.8/ Thus, at the end of March 1988, 16 percent of commercial bank loans were to firms designated under official rationalization programs. Of 650 billion won in uncollected interest payments by commercial banks, more than two-thirds were owed by rationalized firms. These losses depressed bank net profits relative to total assets, which reached an all-time low of 0.19 percent. Reforms in loan loss provisioning, capital requirements, and lending rules are essential for strengthening banks and introducing greater discipline in the financial sector.

The supervision of commercial banks in Korea is the responsibility of the Office of Bank Supervision and Examination, an agency affiliated closely with the BOK. The NBFI sector, which now intermediates 60 percent of financial savings, is regulated by the Ministry of Finance. In most developed countries, bank supervisory agencies are independent and subject to transparent reporting requirements. To be sure, regulatory independence is not always sufficient for proper oversight, as is so evident in the case of the U.S. savings and loan crisis. But it is also true, as demonstrated by the recent financial scandals in Japan, that ministries of finance have too many other conflicting goals to operate effectively as an overseeing body. A separation of the regulatory/supervisory functions from government business and political influence is a necessary, although not sufficient, requirement for effective supervision.

Supervision is made difficult in Korea by the widespread practice of cross-corporate guarantees. Affiliates of the *chaebol* endorse each other's liabilities, so that the distinction between active and contingent liabilities is blurred. BOK data submitted to the National Assembly suggest that conglomerates in Korea have offered payment guarantees on liabilities equal to at least three times their net worth. For the top five *chaebol*, their potential liabilities exceed their net worth by a factor of 3.7 (see Table 19.11). Banks are not able to say with clarity what capital is being pledged as collateral for a given liability. Overall lending by conglomerates is not tallied in a way that makes it possible to assess the risks facing a bank's portfolio. This problem is exacerbated by the blurred line between personal borrowing by *chaebol* owners and corporate borrowing, weak corporate disclosure requirements, and generally weak coordination among regulatory agencies.9/

7/ Profitability is directly related to the share of non-performing loans in nationwide commercial banks, according to P.J. Kim as reported in Nam (1991).

8/ This included, according to Office of Bank Supervision and Examination data reported by Nam (1991), funds to subsidize interest rates for restructured industries, extended grace periods on repayments, fresh concessional funds to firms taking over unprofitable firms as part of official workout and placement of firms, and straight writeoffs.

9/ See Nam (1990) for a discussion of regulation of the securities market.

Table 19.11. Net worth and debt-payment guarantee of core business of conglomerates: August 1991

Group	Net worth (bil won) (A)	Debt-payment guarantee by core business (bil won) (B)	Guarantees per won of net worth (B/A)
Hyundai	1,332	2,168	1.6
Daewoo	1,218	5,364	4.4
Samsung	1,195	5,782	4.8
Lucky-Goldstar	1,295	4,507	3.5
Hanjin	390	2,108	5.4
Ssangyong	1,052	1,980	1.9
Sunkyung	759	689	0.9
Korea Explosives	734	1,974	2.7
Daelim	3	631	233.7
Lotte	235	29	0.1
Average of top 5 groups	5,430	19,929	3.7
Average of top 10 groups	8,213	25,232	3.1
Average of top 30 groups	12,413	38,433	3.1

Source: BOK data submitted to National Assembly.

Many of these issues have been addressed by supervisory agencies and by the CAMEL system recommended by the Bank for International Settlements (BIS).10/ The BIS has also proposed a risk-adjusted approach to capital adequacy, and this has been adopted in principle by most OECD countries and should be operationalized by 1992. The approach requires banks to categorize their assets by risk categories. In the Korean context, for example, loans for speculative real estate purchases would be rated differently from plant and equipment investment, as would loans backed by tangible assets from loans guaranteed by other *chaebol* affiliates. Appropriate risk-based capital requirements would encourage the risk-adjusted pricing of capital and would make it unnecessary to apply special ad hoc constraints on bank portfolios or lending activities.11/

Bank and Nonbank Intermediaries. Bank management is still not independent in Korea, with most CEOs appointed or recommended by government. According to Nam (1991), policy loans still account for almost half of domestic credit, including the lending of government banks to industry, agriculture, and housing. Banks and NBFIs cannot charge risk-based prices for capital. Entry into the banking sector is restricted and price competition is limited. These factors have retarded the development of independent financial intermediaries. Banks and other financial institutions have not been able to exercise purely commercial judgments or to develop commercial lending expertise.

The effect of a repressed financial sector on industrial development is hard to quantify, but given Korea's present stage of development, it is almost certainly negative. Compared to either Japanese or Taiwanese statistics, Korea's financial deepening is low, as measured for example by the ratio of domestic financial assets to GNP. Although equity financing is increasing, the debt–equity ratios of Korean firms still make them vulnerable to interest-rate cycles. These problems affect not only the allocation of resources, but also severely constrain the use of monetary policy as a tool of macroeconomic management. In addition, the slow development of the financial sector makes it difficult to liberalize the service and capital accounts, despite growing international pressure in these areas.

In sum, Korea needs to develop a stronger, more competitive, and more independent banking sector. This will require settling on a one-time basis the questionable portfolios of commercial banks. It will also require a transfer of decision-making authority to shareholders and the managers who represent them. To check the potential abuse of these new opportunities, supervisory practices will have to be strengthened and barriers to entry reduced. These changes cannot occur overnight, but far more rapid progress is possible than experienced during the 1980s. With such changes, the Korean financial sector can begin to accumulate the authority

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10/ CAMEL refers to examinations of a bank's capital, assets, management, equity and liquidity.

11/ Direct controls on real estate lending activity have also proved ineffective in Japan, where banks founded special (for the most part wholly owned) subsidiaries to circumvent restrictions on their real estate portfolios. Many of these subsidiaries are now in severe financial trouble.

and experience needed to manage resource allocation privately, following the successful models of Germany and Japan.

Competition Policy

The structure of industrial ownership in Korea is the result of deliberate policies that concentrated capital in the hands of fast growing firms. Size became an especially important objective during the heavy and chemical industry drive of the 1970s. Intercompany shareholding was also permitted, leading to further concentration of ownership. In the wake of these policies, the *chaebol* have assumed a commanding position in Korean industry. The top 10 *chaebol*, for example, own half of the 100 largest firms and account for 62 percent of the value of manufacturing shipments (Lee and Lee 1990).

When measured by traditional concentration ratios, however, business concentration in Korea is similar to that in other countries and has even declined in the last decade.12/ Nor do the *chaebol* seem to focus their activities exclusively in highly concentrated industries (Table 19.12). But the *chaebol* do play an important role in a majority of those commodities identified as "market dominating" by the Korean Fair Trade Commission (KFTC), that is, in the 131 markets where one producer accounts for more than 50 percent of output or the top three exceed 75 percent of output. More than two-thirds of these products were dominated by the largest 30 *chaebol* in 1989. (See Lee and Lee 1990.) In more than 80 percent of these markets a conglomerate had to compete with at most one other conglomerate taken from the top 20 firms. In effect, a small number of *chaebol* share markets with each other in a wide variety of industries. In this setting the temptation to contain competition must be very high.

The first regulatory action of consequence in Korea, the Price-Stabilization and Fair Trade Act of 1975, was initiated not to improve competition but rather to halt inflation. The focus was to "stabilize" markets by designating monopoly products for surveillance and subsequent price action if the price was found to be excessive. Unfair trading practices were defined as unwarranted price movements rather than market domination. Worried by the increased size of the conglomerates, the government introduced a Monopoly Regulation and Fair Trade Act in 1980 to curb big-business power. The KFTC was strengthened in 1986 with rules designed to limit economic concentration by restricting intercompany ownership13/ and regulating, for the first time, anticompetitive mergers by business groups. The KFTC took a step toward independence in 1989, but it is still affiliated with the Economic Planning Board.

12/ Lee and Lee (1990) report that the percentage of shipments accounted for by the largest 100 firms fell from 45 percent to 39 percent between 1977 and 1987 and that the employment shares by the top 100 also fell from 24 percent to 20 percent over the period.

13/ Investments by large business groups in other companies of the group cannot in total exceed 40 percent of the net assets of the company.

Table 19.12. Number of markets in which largest 30 business groups are operating, by market shares: 1982 and 1987 (Unit: no. of commodities, percent)

Market share	Top 5 groups 1982	Top 5 groups 1987	Top 10 groups 1982	Top 10 groups 1987	Top 30 groups 1982	Top 30 groups 1987
Over 80%	33	42	48	64	74	103
	(7.2)	(6.5)	(6.9)	(7.4)	(6.6)	(6.9)
60 - 80%	31	38	39	47	58	81
	(6.7)	(5.9)	(5.6)	(5.4)	(5.2)	(5.4)
40 - 60%	74	82	92	98	121	151
	(16.1)	(12.7)	(13.2)	(11.3)	(10.8)	(10.1)
20 - 40%	87	141	120	186	190	291
	(18.9)	(21.8)	(17.2)	(21.4)	(16.9)	(19.4)
Less than 20%	236	345	398	494	678	873
	(51.2)	(53.2)	(57.1)	(56.8)	(60.3)	(58.2)
Total	461	648	697	869	1,125	1,499
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Sources: Lee (1986) and Lee and Lee (1990).

Note: Numbers in parentheses denote the percentage of markets.

Although the concentration in the manufacturing sector declined and intercompany investments fell in the 1980s, the policy changes did not dramatically change the competitive environment. In the KFTC's first decade (1980–89) over 2,000 business mergers were approved and only two rejected. The number of business-group subsidiaries has dramatically increased; according to KTFC data, there have been 532 horizontal mergers, 369 vertical mergers, and 1,102 diversifications into new business areas. Nor was much progress made on reducing entry barriers. The government's own assessments indicate that 89 key industries were subject to regulatory entry barriers in 1988. Some 218 regulatory statutes in 54 laws affected these industries, with many regulations on entry, standards, pricing, lines of business, production capacity, and geographic markets (EPB 1991:6).

In international perspective, Korean competition policy appears to lie closer to that of the European Economic Community (EEC) than that of the United States. In the U.S. antitrust laws actively discouraged monopolistic and collusive behavior by preventing mergers among competitors and by dissolving monopolies such as Standard Oil, American Tobacco, and more recently AT&T. U.S. deregulation policies have promoted vigorous competition, which in the case of airline deregulation have produced particularly large-scale entry and exit from the industry. Competition policy has been less vigorously enforced in the post-Reagan era.

Audretsch (1989) notes that, in the EEC, industrial policy encourages size for international competitiveness, while competition policy discourages market-dominating positions. Individual European countries, however, have taken a permissive approach. France actively encourages mergers to create national champion firms. In Germany, cartels can be legal if registered; 241 cartels existed in Germany in 1983 (Audretsch 1989), of which 52 were focused on foreign markets.

In Japan the total number of legal cartels was 505 in 1982, including 59 export cartels. In both Germany and Japan structurally depressed industries are eligible for rationalization programs, including government-organized cartels. While the fair-trade concept in Japan is patterned on U.S. antitrust laws, in reality antitrust exemptions and legal cartels are much closer to the norm (see Caves and Uekusa 1976, Audretsch 1989, and Ueno 1980 for further discussion). Small- and medium-industry cartels, often regional rather than industry-specific, exist for long periods, as do rationalization cartels created under depressed industry laws.

Like other countries with ambitious industrial policies, Korea has consistently encouraged its conglomerates to be competitive internationally and has not intervened aggressively to create competition at home. In 1987 only 44 percent of Korean domestic markets (by sales volume) were classified as competitive, with "competitive" defined as the top three firms controlling less than 60 percent of the market (Lee and Lee 1990). Evidence on the degree to which firms exploit their oligopoly positions is not available, but Korea may fall into that group of countries where many consumer goods (including consumer goods made in Korea) seem to be more expensive in Korea than in other countries.

Should Korea pursue a more aggressive approach toward competition? The answer is probably so. While present policies appear to benefit producers at the expense of consumers,

consumers' losses can be limited by setting the barriers to imports at a low level. Since most large companies actively compete in foreign markets, they have a strong incentive to improve productivity and reduce costs. The key is to provide adequate regulatory incentives for true gains to be passed on to domestic consumers as well. In theory, as long as import barriers are relatively low, competition policy is redundant; foreign competition can provide market discipline at low administrative cost. Experience in other countries has shown, however, that import discipline can be circumvented and it is important for Korea to avoid this trap. Moreover, it may be even more important to focus competition policy on nontraded industries.

Trade Policy

Trade policy needs to be closely integrated with industrial policy. Korea's exceptional success in international markets argues for careful adjustments that maintain the momentum of past achievements. Particularly important are policies that maintain market access to Korea's key export markets, such as the United States; initiatives that diversify Korea's trade toward countries emerging as important new markets; and policies that maintain the competitiveness of Korean companies. Below, we consider the implications of the industrial policy issues examined above for export policy and import policy, respectively.

Export Policy. Although the fundamental features of Korea's pioneering export promotion system (an unusually effective drawback system implemented through the domestic letter of credit and automatic access to low-cost export finance) remain in place, the direct subsidies implemented during the early stages of export promotion (such as tax advantages to exporters, excessive wastage allowances on duty-free imports, and highly subsidized access to long-term capital) have long since been dismantled. This is a good thing, since such policies would have made its exports to the United States and other countries vulnerable to countervailing penalties. It should be anticipated that export incentives will weaken somewhat if interest ceilings are lifted on bank credit.

The major new role of government in the 1980s on the export side has been to be gatekeeper for domestic industries and negotiator vis-à-vis major markets for access. The proportion of Korean exports subject to VERs has grown significantly and now accounts for a major percentage of exports. Clearly the issue of "voluntarily" limiting exports cannot be separated from access to Korea's market and leads to the difficult policy area of managed trade. What is clear is that there remains a legitimate economic and political role for government in promoting market access and seeking to maximize national welfare gains.

Import Policy. After a substantial liberalization of the import system in the late 1960s, the share of commodities subject to restrictions increased up to the late 1970s. In the 1980s Korea sharply expanded the list of liberalized commodities; today more than 95 percent of all commodities, including virtually all manufactured commodities, are "automatically approved." Some progress has been made also in abolishing special laws that restrict even automatic approval commodities.

Still, questions remain about the openness of the Korean market. The volume of consumer-goods imports remains low, and the prices of imported goods, especially higher quality goods, are high in comparison to other markets. Reportedly the government has taken direct action—including income tax investigations—against purchasers of foreign luxury goods such as passenger cars (Jacobson 1990). There are also programs that provide low-interest loans to reduce imports ("localization") and to shift imports from Japan to the United States ("diversification") for selected commodities. In general, the government initially tended to handle the trade imbalances of the last few years with new policy interventions rather than rapid adjustments in the exchange rate, both on the upside in 1987–88 and on the downside in 1990–91.

These questions notwithstanding, Korea is very open by international standards, and one cannot argue that import restrictions are compromising the economy's linkages with world markets. The export ambitions of Korean companies have kept them intensely engaged in international competition, with visible benefits in technological progress and productivity. Thus the question whether interventions should continue hinges on other policy goals.

Korea's future import policy needs to be guided by four broad objectives. On the side of continued protection, the main argument is that some infant industry protection may be justified in selected new industries. We would prefer other, functional policies for this purpose. It is also worth noting that Korea has done exceptionally well in the past in introducing new products into international markets without significant prior domestic sales (perhaps because other instruments bore the brunt of the support of new industries).

Three other objectives suggest a further relaxation of restrictions. First, exposure to international competition is a better approach for controlling the economic power of the *chaebol* than an aggressive and acrimonious competition policy. Second, improved access to imported consumer goods would provide consumers with an important symbol of Korea's increased standard of living. (As in Japan, high quality consumer goods may also act as a substitute for increasingly expensive goods in relatively fixed supply, such as real estate and housing.) Third, a liberal import policy is essential for maintaining market access in the United States and Europe, and it could help Korea develop new markets in Eastern Europe and Asia. On balance these arguments call for continued progress on trade liberalization, which in turn implies a greater role for exchange-rate adjustments in handling cyclical adjustments in the balance of payments.

TOWARD A NEW BUSINESS–GOVERNMENT COMPACT

Korean industrial policy, which has guided the Korean economy through nearly three decades of spectacular growth, is showing its age. The policy has not been adjusted fully to the new challenges facing the economy, and it has not recognized the obsolescence of its key instruments. This paper has argued that the time has come, as in other advanced industrial countries, to disengage the government from managing the economy's structural development and to adopt a new compact to delineate the responsibilities of business and government.

Under this compact, responsibility for allocating investable funds would be shifted fully to the industrial and financial sectors, but at the price of greater competitive discipline and regulatory oversight. Establishing this new framework presents an enormous challenge to policy. In addition to complexities of the transition, the government will have to maintain macroeconomic stability and the momentum of savings and investment, tackle the "new" market failures associated with Korea's rising technological level, and develop new institutions to increase the flow of information, reduce conflict, and ensure the equitable sharing of the fruits of economic progress.

What "model" industrial policy is to be sought for Korea today? It is not U.S.-style policy, since the role advocated here envisions a more direct and coordinated involvement in the development of technological resources and the supervision of the financial system. It is not French-style policy, since it advises against strong interventions through government-arranged mergers and large-scale policy lending. Of the models reviewed in this paper, it is closest to the German and Japanese models. These countries are unique in having exceptionally close working relationships between the financial and industrial sectors. These relationships assure the availability of long-term capital for the development of new products and industries, and also impose close supervision and considerable financial discipline on industrial companies. It is hard to see how a government could improve on the results of these mechanisms, and in both countries the government has essentially withdrawn from influencing the allocation of credit.

As the Korean financial sector develops into a stronger, independent entity, it may well generate German- or Japanese-style relationships between financial institutions and their industrial clients. If the independence of the financial sector is achieved under present restrictions (effectively enforced) on maximum-share ownership, the result will approximate the German model, with powerful, independent banks playing the lead role in the finance–industry relationship. There may well be transitional difficulties with this model because under dispersed ownership it will take time to establish strong, private control over bank operations, and the government, as lender of last resort, will have a strong incentive to maintain control. It may therefore be necessary to use Korea's traditional corporate strength to create (non-family) banking *chaebol* to develop Korea's banks into respectable world-class financial institutions. Though unconventional, this may be the most effective way to strengthen domestic financial institutions.

If the independence of the financial sector is achieved in the absence of limits on share ownership, the result is likely to approximate the Japanese financial setup, with industrial companies closely linked to their group bank through cross-ownership ties. In this scenario, each major *chaebol* might acquire and develop a group bank; and being responsible for its safety and profitability, it would have a strong incentive to use the bank to impose strict financial discipline on its various subsidiaries.

Korea has used the lessons of Japanese experience very effectively in developing its own policies in the past. The Japanese model remains attractive at this juncture, but some important differences are becoming significant. In its early stages, Japanese industrial policy relied on some of the same instruments that Korea later adopted to encourage investments in infant

industry and to develop home markets as a base for international competitiveness. But in its later stages, Japanese policy has moved away from intervention, focusing instead on information sharing and coordination, and on indirect, functional support for new activities. In this context, and deprived of its earlier powerful tools, Japanese industrial policy has relied heavily on the cooperative relationships that bind Japanese business and government, and Japanese business and labor.

Can Korea base its industrial policy on similar relationships? We would argue, not yet. Zysman (1983) suggested that an effective industrial policy requires (i) a national consensus on broad economic goals, (ii) effective policy instruments, and (iii) a forceful bureaucracy. It is worth reviewing briefly how Korea stands on these criteria.

Korea had a consensus on economic policy through the Fifth Republic, primarily because the government was strong enough to impose its vision on all critical actors. No similar cohesiveness seems to exist today. A particularly divisive issue is the distribution of gains from Korea's phenomenal growth. Long considered a model of equitable growth, Korea is now facing a widening distribution of wealth (Leipziger et al. 1992) and a less equal distribution of income. Koreans are no more able to afford housing today than they were 25 years ago. Due to minimal taxes on capital gains and on earnings on financial assets, many see the tax system as inequitable. There is considerable public resentment of the skewed distribution of wealth, and especially of the family-owned *chaebol*. These concerns can easily explode in protest, as they did in the massive strikes of 1988 and 1989.

In the absence of a consensus, and given an increasingly pluralistic political process, it is now likely that industrial policy will be drawn into the political arena, where it will lead to conflict and debate rather than concerted action. Given this risk, it is best for government to focus its energies on a broad vision of technological development—consensus surely exists on this—leaving the more contentious allocational issues to private market forces.

Finally, while Korea's bureaucracy remains highly competent, it too needs to adjust to new political and economic realities. Despite its elite status, the bureaucracy's power is declining relative to the legislature and business. Government officials are now frequently called to testify before the National Assembly, and business and social leaders are increasingly willing to criticize government policies in public. Rightly or not, the bureaucracy is sometimes viewed as authoritarian and arbitrary. Policies that exacerbate the conflict between the bureaucracy and different elements of the public—policies that involve promulgating rules and decisions and disciplining individuals or companies, even if these enjoy general popular support— will ultimately reduce the government's effectiveness as a coordinating agent.

Thus, the role of the bureaucracy itself needs to be strengthened by shifting its functions toward predictable, regulatory, coordinative activities rather than ad hoc policy measures. The government will need to bridge the interests of producers and consumers, of business and politicians. These objectives will be best achieved through ongoing consultations and predictable actions based on statutory powers rather than political imperatives.

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